

CLAIREX ELECTRONICS DIV

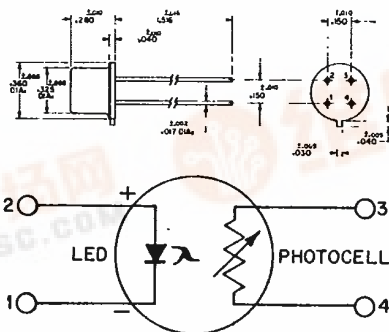
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T-41-81

CLM7000
CLM7100
CLM7200

LED-Photoconductor Isolators

This new photomod series combines a photoconductive cell and an LED lamp in a hermetically sealed TO-5 package, for high reliability and long life. The moderate speed of response of the photoconductor eliminates much of the noise transmitted by silicon opto-isolators. This characteristic is especially useful in audio applications. All leads are isolated from the case.



TECHNICAL DATA

LED	CHARACTERISTICS	TEST CONDITIONS	CLM7000			CLM7100			CLM7200			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I_{fmax}	Maximum forward current		40.00			40.00			40.00			milliamps
V_f	Forward voltage	$I_f = 20.00 \text{ mA}$	2.00			2.00			2.00			volts
I_r	Reverse current	$V_f = 3.00 \text{ V}$	100.00			100.00			100.00			microamps
PHOTOCELL V_{max}	Cell voltage		100.00			100.00			100.00			V DC-PAC
P ①	Power dissipation	25°C	100.00			100.00			100.00			milliwatts
C_c	Cell capacitance	$I_f = 0 \text{ mA}$	2.00			1.60			1.00			picofarad
PHOTOMOD R_{on} ②	On resistance	$I_f = 20 \text{ mA}$ $I_f = 2.0 \text{ mA}$	0.60 3.50			2.00 11.00			5.00 36.00			kohms kohms
R_{off}	Off resistance	5 sec. after $I_f = 0 \text{ mA}$	5.00			10.00			10.00			megohms
T_r ③	Rise time	Time to 63% of lin. cond.	3.50			3.50			3.00			milliseconds
T_d ④	Decay time	Time to 100 kohms	120.00			40.00			10.00			milliseconds
V_{bd}	Isolation voltage		750.00			750.00			750.00			volts DC or PAC
C_i	Isolation capacitance		0.80			0.80			0.80			picofarad
T_c	Temp. coef. (dR/dT)	$I_f = 5 \text{ mA}$	0.70			0.60			0.60			%/ $^\circ\text{C}$
T_{hd}	Tot. harm dist. @ 1000 Hz	$I_f = 20 \text{ mA}$	0.02			0.02			0.02			%
G	Slope	$I_f = 0.2 - 20.0 \text{ mA}$	1.05			1.15			1.15			

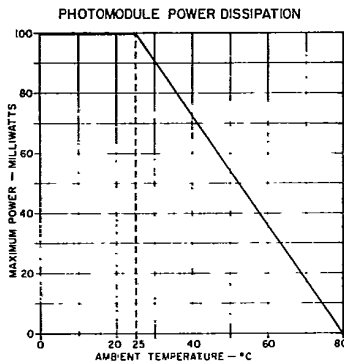
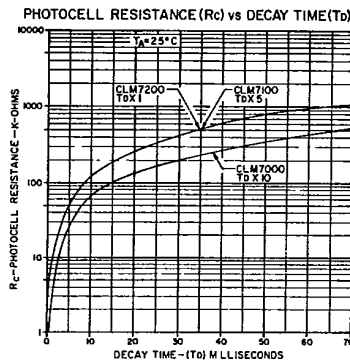
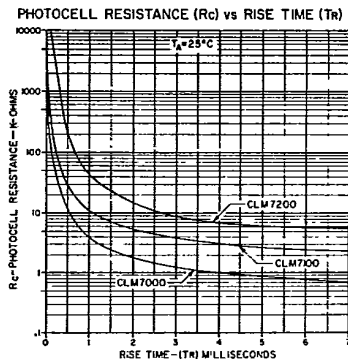
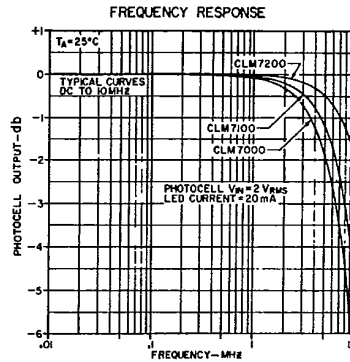
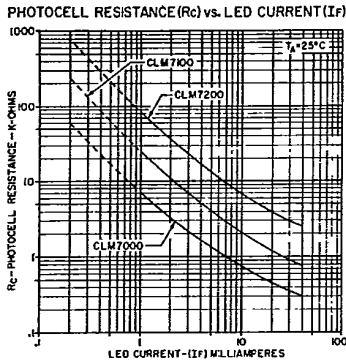
Temperature Storage — 40° to 80° C

Absolute Maximum Ratings:

Operating — Derate power to 0 to 80°C

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PC-LED PHOTOMOD SLOPE CHARACTERISTICS



RESPONSE TIME

The t_{RISE} and t_{DECAY} curve is the response time of the module when the lamp current is instantaneously varied from either zero to rated lamp current (t_{RISE}) or rated lamp current to zero (t_{DECAY}).

These curves are representative characteristics. For specific specifications, and application assistance, please contact the factory.

Notes:

- ① P.D. at 25°C case temperature. Derate linearly to 0 at 80°C . Allowable PHOTOMOD dissipation is determined by the photocell temperature which must not exceed 80°C for continuous operation. Lead soldering temp. 260°C , 5 sec. dwell max.
- ② After 24 hours on.
- ③ Rise time measured after 24 hours on + 5 seconds off.
- ④ Decay time measured from 24 hours on.